

*PHOLAS OBTURAMENTUM*; AN UNDESCRIBED  
BIVALVE FROM SYDNEY HARBOUR.

By C. HEDLEY, F.L.S.

[Plate XIV.]

IN the course of a critical examination of various Mollusca from Port Jackson, specimens of the only *Pholas* reported thence passed under review. This species has hitherto been accepted as *P. similis* by all writers and collectors who have occupied themselves with the marine mollusca of our coast. This identification appears to have originated with G. F. Angas, who in his "List of additional Species of Marine Mollusca to be included in the Fauna of Port Jackson and the adjacent Coasts of New South Wales,"\* enumerates as species 93 :—

"*BARNEA SIMILIS*. *Pholas similis*, Gray, MS. Brit. Mus.; Thesaurus Conch, pl. ciii., f. 12–14; 'Bottle and Glass' rocks, in sandstone (Brazier)."

This entry is repeated verbatim by Mr. T. Whitelegge in the "List of the Marine and Freshwater Invertebrate Fauna of Port Jackson and the Neighbourhood."† Mr. Brazier informs me that this determination was also supported by the late G. B. Sowerby.

Prof. Tate records *Barnea similis*, Gray,‡ as "burrowing in clay at low tide mark, Port Lincoln, St. Vincent Gulf, and south-east coast [of South Australia]; also in Tasmania."

On examining the statement of Angas closely, our faith in his accuracy is weakened by observing that Gray's name was not, as he states, a manuscript one. It was first published with a description in 1835 in the Appendix of Yates' New Zealand, p. 309, and it again appeared, with further information, eight years later, in Vol. ii. of Dieffenbach's New Zealand, p. 254 where the author remarks that it is "very like *Pholas parvus*, but larger, broader, and more acute in front."

Between the New Zealand and the Australian species a discrepancy at once appears on comparing examples of the Port

\* Proc. Zool. Soc., 1871, p. 99.

† Journ and Proc. Roy. Soc. N.S.W., xxiii. (1889), p. 234.

‡ Trans. Roy. Soc. S. Australia, ix., p. 80.

Jackson *Pholas* with the figures illustrating the former (Thesaurus Conchyliorum, Vol. ii., pl. ciii., ff. 12, 13, 14).<sup>\*</sup> Having no examples of the New Zealand species at my disposal, I am constrained to base my remarks on these engravings, which, from their finish, should be faithful representations. Sowerby's mistake in supposing the species to be an undescribed one, implies that he had Gray's types before him; while both Philippi's diagnosis of *P. antipodum*† and Gray's description answer well to these drawings and also leave no room for doubt that the specimens were actually obtained in New Zealand.

Viewed from the ventral side the difference is most apparent, the gape extending a third further along the ventral margin, and being much wider anteriorly in Sowerby's figure than in the local species; *P. similis* may be likened to a cylinder cut obliquely at an angle of 30° and *P. obturamentum* to one cut at an angle of 45°. Dorsally the profile of the New Zealand form appears to be more swollen and to taper more sharply at the anterior extremity than does the Australian. The spinose ridges would seem to be more feebly developed, and the size to be smaller in the local species; but, without more material for comparison, the writer would not attach specific importance to such characters. The Sydney shells, having been procured from sandstone rock, may reasonably be supposed to be smaller and smoother than if their burrows had been drilled in softer substances.

The next ally of our species seems to be *P. manilensis*, Philippi,‡ next to that the British *P. parvus*, Pennant, and least of the three the New Zealand *P. similis*. The unfigured Papuan *P. beccarii*, Tap. Can.§, probably is akin.

These five appear to represent a small and natural group, among which the Australian species is clearly distinguishable by the more anterior position of the beaks and by the less posterior extension of the gape.

This species may be characterised as follows:—

*PHOLAS OBTURAMENTUM*, *sp. nov.*

Shell somewhat tongue-shaped, evenly tapering from the beaks to the posterior extremity, rounded posteriorly, dorsal and ventral margins straight, gibbous ventro-anteriorly, the closed valves including a heart-shaped space rather longer than wide; valves in

<sup>\*</sup> Except Philippi's Abbild. Besch. Conch., Vol. iii., *Pholas*, pl. i., f. 3., the other published figures, viz., Conch. Icon., Vol. xviii., *Pholas*, pl. iii., f. 10, and Conch. Cab. (2) Vol. xi., pt. xx., pl. vi., f. 3, are mere copies, the latter a bad one, of Sowerby's f. 12.

† Zeits. Mal. iv., 1847, p. 71, &c.

‡ Thes. Conch. pl. ciii., ff. 17, 18.

§ Ann. Mus. Civ. Genova, vii., p. 1032.

contact along the ventral margin for half the length of the shell, the left valve slightly overlapping the right. Colour a uniform dull white. Epidermis pale straw colour, largely abraded, thin and very wrinkled. Sculpture about thirty concentric growth laminae in the interstices of which are two or three raised hair lines; anteriorly these laminae are puckered up into lines of square-headed thorns by transverse waves radiating from the beaks. Opposite the beaks the thorny ridges diminish for a few series and cease, posteriorly they are represented by faint wrinkles on the growth laminae. Beaks situated at a quarter of the length of the shell from the anterior extremity. Hinge margin narrow, sharply recurved, not appressed to the valve and destitute of such denticles as possessed by *P. dactylus*. Dorsal plate lanceolate, single, entire, striated by divaricating growth lines, with a shallow median furrow. Subumbonal process long, flat and curved. Length 40, height 20, breadth 16 mm.

Attached to some specimens are pale brown, tough, coriaceous siphon sheaths.

*Type*.—In the Australian Museum, Sydney.

The specimens on which my description is based were collected by Mr. Brazier in a small outcrop of shale at Vacluse Bay. That gentleman informs me that he also encountered the species at "The Nobbys," near Newcastle, and at the mouth of the Bellinger River, some examples attaining twice the dimensions of those now recorded.

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## NOTES ON AUSTRALIAN TYPHLOPIDÆ.

BY EDGAR R. WAITE, F.L.S.

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### 1. TYPHLOPS CURTUS, *Ogilby*.

It is worthy of remark that no one in Australia has hitherto investigated the *Typhlopidae* of the continent: the reason probably lies in the fact that only a very small portion of this immense area can be said to be at all adequately known, and scientific workers have ample material of more attractive and better differentiated forms than characterise the *Typhlopidae*. Although of all snakes this group is admitted to be the most difficult of determination, some fifteen Australian species are known; all these have, however, been described in Europe: by Gray and